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IN THE APPLICATION

OF

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FOR A

RETAIL ELECTRICAL WIRE REEL CADDY

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RETAIL ELECTRICAL WIRE REEL CADDY

BACKGROUND OF THE INVENTION

1. FIELD OF THE INVENTION

The present invention relates to wire reel assemblies. More particularly, the present invention relates to a caddy having a wire reel for holding and distributing electrical wire from a wholesale supply coil.

2. DESCRIPTION OF THE RELATED ART

The use of insulated electrical wire is widespread and is available to construction contractors and hobbyists or homeowners at most hardware stores. The wire generally is obtained from a wholesaler or maker in standard sized coils which are wrapped and held in a coil configuration by ties for transport or handling. The retailer, such as the hardware store, must uncoil the wire to measure and sell desired lengths to a customer. Popular types of wire are generally provided in at least two width of coil depending on the configuration and size of the electrical wire. These coils generally have the

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same inner diameter, but the cross section of the coil may vary, depending on the size of wire. The cross section of coils is generally one of two sizes for retail distribution. It would be desirable to provide a caddy supporting a reel which is adjustable to easily receive either size of electrical wire coils as received from a supplier and to support the wire coil for even, flat, and straight distribution of wire in a length as sold to a retail customer. It would also be desirable to provide such a caddy which is easily moved between locations along with the reel of wire supported for rotation thereon. Such a caddy and wire reel may then be easily moved to and between building sites if desired or between storage room and retail space.

U.S. Patent No. 6,199,786 B1, issued March 13, 2001, to Lessard et al., describes a wire reel assembly having a reel, a reel support, and a reel securing assembly. The reel includes a central body and removable sides. The central body is removably mounted to an arm of the reel support allowing one of the removable sides to be disconnected from the central body without requiring disassembly of the reel support.

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U.S. Patent No. 3,072,357, issued January 8, 1963, to Sprague et al., describes a portable reel carrier, which

includes a plurality of identical reel portions, pairs of which interlock to form wire cable supports when placed in opposed positions on a support shaft.

U.S. Patent No. 3,503,569, issued March 31, 1970, to Gildart, describes a collapsible reel that includes wire frame end flanges which may be manually removed from the reel to permit uncoiling.

U.S. Patent No. 3,432,113, issued March 11, 1968, to Freedman, describes a split reel having a central hub of two interfitting parts attached to end flanges.

None of the above inventions and patents, taken either singly or in combination, is seen to describe the instant invention as claimed. Thus, a retail electrical wire holder solving the aforementioned problems is desired.

SUMMARY OF THE INVENTION

The inventive retail electrical wire reel caddy has a steel frame which may be rested upright, the upper portion of the caddy serving as a handle. The caddy may also be rested in a prone position on its back for hauling, such as in a truck bed, the back having a slight angled configuration allowing the user to easily grasp the caddy frame for lifting it to the upright

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position. The reel is made up of identical front and rear circular members, the outer member being turned to face the rear member so as to interlock "U"-shaped wire coil supports which are integral with supporting spokes extending between an outer rims and inner reel hubs. The caddy has a shaft extending forward from a mounting plate located on the back vertical portion of the frame, the frame having a base portion extending forward beneath the shaft and supported reel so as to stand securely when a coil of wire is supported on the reel and the wire is distributed from the reel for sale.

Accordingly, it is a principal object of the invention to provide an electrical wire reel and caddy for retail dispensing of wire.

It is another object of the invention to provide a wire reel and caddy which is adjustable for different sized coils of wire.

It is a further object of the invention to provide a wire reel and caddy as above which is adjustable to compensate as the wire is drawn down.

Still another object of the invention is to provide a wire reel and caddy as above which is easily moved between locations.

Yet another object of the invention is to provide a wire reel and caddy as above which may be stored upright or level on its back.

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It is an object of the invention to provide improved elements and arrangements thereof for the purposes described which is inexpensive, dependable and fully effective in accomplishing its intended purposes.

These and other objects of the present invention will become readily apparent upon further review of the following specification and drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is an environmental, perspective view of the electrical wire reel caddy of the present invention with a large wire coil installed.

Fig. 2 is a view as in Fig. 1 with the outer reel portion, washer, and lock pin exploded away.

Fig. 3 is a view as in Fig. 2 with the inner reel portion exploded away and without wire coil.

Fig. 4 is a side elevation view of the inventive caddy and reel with a small wire coil installed.

Fig. 5 is a side elevation view as in Fig. 4 showing the coil supports without the wire coil.

Fig. 6 is a rear elevation view of the inventive caddy and reel with the wire coil.

Fig. 7 is a detail view of the shaft with spaced cross bores of the caddy of Fig. 2.

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Similar reference characters denote corresponding features consistently throughout the attached drawings.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present invention is retail electrical wire reel caddy having a steel frame which may be rested upright, the upper portion of the caddy serving as a handle. The caddy may also be rested in a prone position on its back for hauling and has a shaft extending from frame back for mounting a reel. The reel is made up of identical front and rear circular members, the outer member being turned to face the rear member so as to interlock "U"-shaped wire coil supports which are integral with supporting spokes extending between an outer rims and inner reel hubs. The reel is adjustable to hold different width wire coils. The frame has a base extending forward beneath the shaft and the reel mounted thereon so as to stand securely when a coil of wire is supported on the reel and the wire is distributed from the reel for sale.

Referring to the Figure 1, there is shown an adjustable electrical wire coil retail wire dispensing caddy referred to be the reference number **10** having a support frame **14** and a reel **16** for holding and dispensing electrical wire **W**. Frame **14** has an upright portion **18** and a base **20**.

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Referring to Figs. 2-7, the upright portion **18** of support frame **14** has two spaced uprights **22** extending upward from base **14** connected at their upper end by upper cross member **24** which may serve as a handle for moving the caddy **10**. Reel support shaft **26** extends forward from frame upright portion **18** centrally over frame base **20** and supports the inner reel portion **28** and the outer reel portion **30** for rotation in a plane parallel to frame upright portion **22**. As shown, inner reel portion **28** and outer reel portion **30** are structurally identical, the outer reel portion being turned toward the rear and partially rotated to interfit and provide support for electrical wire coil **W**.

Reel portions **28** and **30** each have a centrally mounted, cylindrical reel hub of such inner diameter so as to slidingly fit over shaft **26** and rotate thereon. Reel hub **32** has a free end and is attached free end to a circular plate **34 opposite the free end**. A reel rim **36** is circumferentially attached to reel hub **32** by four, equally spaced, spokes **38** affixed as by welding to hub circular plate **34**. Reel spokes **38** each form a "U"-shaped coil support **40** spaced therealong and extending axially in concert with reel hub **32**, each "U"-shaped coil support forming an outer radius bend **42** formed to fit the cross-section of wire coil **W**.

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During the mounting and assembly of reel **16**, inner reel portion **28** is mounted on caddy reel support shaft **26** with reel

hub **32** and "U"-shaped coil supports **40** extending outward. Then outer reel portion **30** is mounted with reel hub **32** and "U"-shaped coil supports **40** extending inward such that they interfit between those of the inner reel coil supports so as to collectively form an inner coil support reel hub of a diameter equal to that of the electrical wire coil inner diameter. Washer **44** is located between circular plate **34** and pin **46** is placed in one of cross bores in the end portion of shaft **26** (see Fig. 7) to secure the wire-loaded reel **16** for dispensing wire as desired.

As seen in Figs 4 and 5, a smaller coil of wire **W** is mounted for dispensing. In this case, outer reel portion **30** and washer **44** is moved inward to fit the smaller coil and pin **46** inserted into an inner cross bore **48**. The cross bores **48** are preferably axially spaced at 1/4 inch intervals from the free end of shaft **26** and provide for axial adjustment of the effective width of the reel **16** to accept different widths of wire coil and to provide adjustment as a wire coil becomes reduced in sized due to the periodic removal of wire as it is removed and sold. It may be desirable to adjust the outer reel inward to better support the remaining wire after the substantial removal of the coil reel. As illustrated in Fig. 6, the alternating "U"-shaped coil supports **40** of inner reel portion **28** and outer reel portion **30** must extend for a length so

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as to overlap to form a hub for supporting the wire coil supported thereon.

Referring to Figs. 2, 5, and 6, the caddy base **14** is rectangular and has a front member **50**, a rear member **52** and opposed side members **54** and centrally supports spaced uprights **22** of upright portion **18**. The lower portion of each upright member **22** has a lateral angle brace extending between the upright member **22** and end of the respective adjacent end of the rear cross member **56**. A forward brace extends between the lateral angle brace and the respective adjacent base side member **12**. This bracing provides for a rugged caddy frame, allowing the caddy to carry a heavy coil of electrical wire and to be moved between locations with the electrical wire coil in place without damage to the caddy. As seen in Fig. 5, the lower portions uprights **22** are angled forward from vertical between the rear base member ends and the attachment points of the respective angle braces so as to provide clearance at that point from the floor when the caddy is rested on its upright portion **18** on the floor such as during storage or transport to allow easy grasping of the uprights **22** for setting the caddy upright on base **20**.

A shaft mount plate **60** is mounted as by welding between uprights **22** at a location about half the height of the upright portion **18**. Shaft mount plate **60** receives the inner end of

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centrally located reel support shaft **26** through a centrally located throughbore and shaft **22** attached as by welding at rear shaft mount **62** to the rear of mount plate **60** so as to provide a rugged mounting therefor. The mount plate **60** also acts as a stiffener for caddy upright portion **18**.

When the inventive caddy is loaded with an electrical wire coil and the washer and pin in place, the caddy is ready to dispense electrical wire from the free end (see Fig. 4). As the electrical wire **W** is pulled from the reel **16**, the reel rotates with the reel hub circular plate of inner reel portion **28** turning against the inner surface of shaft mount plate **60**, and the circular plate outer reel portion **30** turns against stationary washer **44**. Since the inner portion **28** and outer portion **30** of reel **16**, are not mechanically connected, the play in the coil and its mounting arrangement allows the reel hub **32** to adjust along shaft **26** so as to allow turning relative to the mount plate **60** when pulling force is applied on wire **W** while dispensing while friction with the reel hub circular plates minimizes turning of the reel **16** at other times, such as during moving or transport.

The various parts of the inventive caddy and reel are preferably steel to provide sturdiness and ease in welding and assembly. The wire dispensing caddy is 23 inches in overall

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height, each outer rim is 15 inches in diameter, the caddy upright portion is 5 1/4 inches in width and said reel support shaft is about 3/4 inch in diameter. The wire dispensing caddy front and rear cross members of the base are 18 inches in length and the opposing side members are 8 inches in length.

The inventive caddy holds any size electrical wire supplied in predetermined length coils. A commonly supplied length of coil is 250 feet. Other benefits of the inventive caddy are that the wire unwinds from the caddy flat and straight, which makes it easier to pull into the walls or along a floor joist, eliminating the need to be straightened for use.

It is to be understood that the present invention is not limited to the embodiment described above, but encompasses any and all embodiments within the scope of the following claims.

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